



# Technology & Engineering Education – Utah

## Scope and Sequence



Technical Training, College, or University, to Work															
Targeted Grade Level	Project Lead the Way Pre-engineering Pathway		Language Arts	Science	Math (Minimum)	The Utah Pre-engineering Pathway	Engineering Technologies	Communication		Visual Arts			Interactive Media Web Development & Administration	Digital Media (Multimedia)	
12 <sup>th</sup> Grade	Capstone	<u>Engineering Design and Development</u>	<u>LA - 12</u>	<u>Chemistry</u>	<u>Pre-Calculus</u>	<u>Pre-Engineering</u> Research and Development Design Analysis, Ethics, and Solving Engineering Problems	<u>Mechanical Drafting</u> <u>Architectural Drafting</u>	<u>Introduction to Screen Printing</u> <u>Digital File Preparation</u>	Radio/Television Broadcasting	Design and Visual Communications	Commercial And Advertising Art	Industrial Design	Commercial Photography	<u>Web Development 2</u>	<u>3D Graphics and Animation</u>  ..... Or ..... <u>Multimedia II</u>
10 <sup>th</sup> & 11 <sup>th</sup> Grade	Specialty (Options)	<u>Computer Integrated Manufacturing</u> <u>Civil Engineering and Architecture</u> <u>Aerospace Engineering</u> available year 2007/2008	<u>LA - 11</u>	<u>Physics</u> (Physics with Technology)	<u>Intermediate Algebra</u>	<u>Materials and Processes Course</u>	<u>CAD Drafting Technology</u>	<u>Advanced to Graphic Communication</u>						<u>Web Development 1</u>	<u>Multimedia I Design &amp; Development</u>
		<u>Digital Electronics</u> <u>Principles of Engineering</u>	<u>LA - 10</u>	<u>Biology</u>	<u>Geometry</u>	<u>Engineering Design Course</u>	<u>Drafting and Design</u>	<u>Interm. to Graphic Communication</u> <u>Intro. To Graphic Communication</u>						<u>Introduction to Information Technology</u> <u>Computer Technology</u>	<u>Introduction to Information Technology</u> <u>Computer Technology</u>
			Foundation	<u>LA - 9</u>	<u>Earth Systems</u>		<u>Elementary Algebra</u>	<u>Foundations of Technology</u> Design Concept Basic Systems: Electrical, Fluid, Mechanical, and Structure						<u>Intro to Communications Technology</u>	
9 <sup>th</sup> Grade		<u>Introduction to Engineering Design</u> (Each PLTW course requires a two-week in-service training)													
8 <sup>th</sup> Grade	<u>Exploring Technology</u> Basic Design & Technology & Engineering Content Area Exploration (Note: PLTW's Gateway to Technology course meets the Exploring Technology standards)														
7 <sup>th</sup> Grade	<u>TLC - CTE Career Exploration:</u> Technology and Engineering Education, Agriculture, Business, Career Guidance, Economics, Family and Consumer Science, Health Science & Technology, Information Technology, Marketing, Trade and Technical, and Work-Based Learning														
	Elementary Programs														



Based on the *Standards for Technological Literacy: Content for the Study of Technology*  
Published by International Technology Education Association

High schools can choose between the two engineering options, PLTW or the Utah Program. They can also choose to provide feeder courses for other CTE programs.

Actual course titles are underlined.  
A Technology and Engineering Endorsement can teach the courses in the colored areas.  
..... This line between courses indicates that there is not required sequence to those courses.



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Targeted Grade Level	Precision Production Trades			Construction Trades		Ag Systems Technology	Mechanics and Repairs					Information Support & Services Technical Support	Network Systems									
12 <sup>th</sup> Grade	Cabinetmaking	Machinist Technician/CNC	Sheet Metal	Welding Technician	Masonry/Tile Setting	Ag Systems Technology	Automotive Technician	Heavy Duty Mechanics/Diesel	Automotive Collision Repair Technician	Small Vehicle Technician	Aircraft Mechanics Technician/A&P	Basic Electronics Technician	Linux Fundamentals	Cisco Certified Networking Adm.								
10 <sup>th</sup> & 11 <sup>th</sup> Grade	Furniture Design and Manufacturing				Concrete Placing and Finishing								Electrician									Microsoft Certified Pro. (MCP)
					Plumbing																	
					Carpentry																	
					Construction Trades Foundation																	
	Woodworking																					
9 <sup>th</sup> Grade	Intro to Manufacturing Technology			Intro to Construction Technology		Intro to Transportation and Energy Technology																
8 <sup>th</sup> Grade	Exploring Technology																					
7 <sup>th</sup> Grade	TLC - CTE Career Exploration: Technology and Engineering Education, Agriculture, Business, Career Guidance, Economics, Family and Consumer Science, Health Science & Technology, Information Technology, Marketing, Trade and Technical, and Work-Based Learning																					